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In the Drawings:

None

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This amendment is in response to the Examiner's Office Action dated 3/16/2005. Applicant is appreciative for the recognized allowable subject matter. This amendment should obviate outstanding issues and make the remaining claims allowable. Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow.

STATUS OF CLAIMS

Claims 1-31 are pending.

Claims 3, 8, 10, 11, 13 and 29 are allowed.

Claims 6, 7, 12, 14-28, 30 and 31 are objected to by the Examiner due to informalities.

Claims 9, 14-21, 24-27, 30 and 31 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and claim the subject matter which applicant regards as the invention.

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Semaan (USP 6,850,483).

Claims 6, 7, 14, 15, 22, 24, 28 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Semaan in view of Shew et al. (USP 6,530,032).

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for a line restoring method for securing, efficiently at a low cost, a substitute path for every path that is logically formed in a transmission section where a failure has occurred in a node of a packet routing network formed by physical

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transmission paths that are installed over a wide area or a long distance and formed redundantly. The presently claimed invention also provides for packet transmission equipment that realizes such a line restoring method. In a network to which the invention is applied, it is possible to flexibly adapt to a variety of configurations of a network and transmission paths and increase the operation efficiency and the total reliability.

#### In the Claims

Claims 6, 7, 12, 14-28, 30 and 31 are objected to by the Examiner due to informalities. As per the examiner's suggestions on pages 2-3 of the office action of 3/16/2005, applicant has made minor amendments to claims 6, 14, 16, 17, 22, 23, 24, and 25 to correct minor informalities, without adding new matter. Hence, applicant respectfully requests the examiner to withdraw the objections with respect to claims 6, 7, 12, 14-28, 30 and 31.

#### REJECTIONS UNDER 35 U.S.C. § 112

Claims 9, 14-21, 24-27, 30 and 31 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and claim the subject matter which applicant regards as the invention. As per examiner's suggestions on page 3 of the office action of 3/16/2005, applicant has made minor amendments to claims 9, 14, 16, and 20 for clarification purposes, without adding new matter. Hence, applicant respectfully requests the examiner to withdraw the 35 U.S.C. § 112 objections with respect to claims 9, 14-21, 24-27, 30 and 31.

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09/800,151REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 2, 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Semaan (USP 6,850,483). To be properly rejected under 35 U.S.C. § 103(a), each and every element of the claims must be addressed through known prior art or be recognized as an obvious variation thereof. Applicant contends that the Semaan reference fails to provide many of the limitations of claims 1, 2, 4, and 5.

Semaan provides for a protection frame for frame relay (FR) traffic which a node generates to inform other nodes about a defect detected on a SONET ring. Semaan's protection frame includes a type of defect and a location of defect, wherein, upon receiving the protection frame, receiving nodes are informed as to the existence of the defect on the SONET ring. Semaan also teaches the use of protection tables for switching a working fiber link to a protection fiber link, wherein protection switching provides a method to re-establish FR traffic in spite of a detected failure on a SONET ring.

In stark contrast, applicant's independent claims 1 and 2 teach the limitation of a connectionless communication path, substituting a transmission section, being secured in a logical layer when a failure occurs in a transmission section (see limitation of claims 1 and 2: "recognizing an attribute of a packet to be relayed as a connectionless service for a preceding transmission section of a specific transmission path...to its succeeding transmission section while a failure in the specific transmission path continues to exist", and page 9, lines 13-16 and lines 22-25 in the application-as-filed).

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The examiner cites figure 1 and column 2, lines 26-55 of the Semaan reference as teaching such a limitation. But, closer reading of the citations merely suggests that Semaan's figure 1 refers to the implementation of a frame relay (FR) protection method. The examiner's citation further expands on the use of QoS in conjunction with Semaan's method and system. Applicant is unsure of how this citation reads on the limitation of a connectionless communication path, substituting a transmission section, being secured in a logical layer when a failure occurs in a transmission section. Hence, applicant contends that the Semaan reference fails to provide many of the limitations of independent claims 1 and 2.

If the examiner still feels that such limitations are still shown in the Semaan reference, the applicant respectfully reminds the examiner that it is the duty of the examiner to specifically point out each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that "the particular part relied on must be designated" and "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified".

The above-presented arguments with respect to independent claims 1 and 2 substantially apply to dependent claims 4 and 5, as they inherit all the limitations of the claims from which they depend.

Hence, applicant respectfully requests the examiner to withdraw the rejections with respect to claims 1, 2, 4, and 5.

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Claims 6, 7, 14, 15, 22, 24, 28 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Semaan in view of Shew et al. (USP 6,530,032). To be properly rejected under 35 U.S.C. § 103(a), each and every element of the claims must be addressed through known prior art or be recognized as an obvious variation thereof. Applicant contends that the combination of the Semaan and Shew references fail to provide many of the limitations of claims 6, 7, 14, 15, 22, 24, 28 and 30.

As mentioned earlier, the Semaan reference teaches a protection frame for frame relay (FR) traffic which a node generates to inform other nodes about a defect detected on a SONET ring.

The Shew reference discloses a method of fault recovery for a network including the steps of establishing a physical topology for the network, aligning a logical topology for the network with the physical such that a router at an L1 cut-through path end point views an L1 cut-through as a next hop, and using a fault indication from the physical topology to effect fault recovery in the logical topology.

In stark contrast, applicant's claims 6 and 14 teach an "alarm packet" which, when a failure occurs, is transmitted to other nodes via a transport label layer (see page 11, lines 4-8 and page 13, lines 16-11 of the application-as-filed). On page 6 of the office action of 3/16/2005, the examiner equates applicant's "alarm packet" with that of Semaan's "protection frame". In column 1, lines 42-44 of the Semaan reference, "protection frame" is defined as a frame "for frame relay traffic which a node generates to inform other nodes about a defect detected on a SONET ring."

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Applicant contends that the "protection frame" of Semaan is not transmitted to other nodes via a transport label layer and, furthermore, the "protection frame" of the Semaan reference fails to indicate the interfacing section (interfacing the packet transmission equipment with each redundantly configured simplex transmission paths in a physical layer) where the failure has been detected. Applicant wishes to note that the Shew reference, just as the Semaan reference, fails to teach the limitations of applicant's "alarm packet". Hence, applicant contends that the limitations of independent claims 6 and 14 are neither taught nor suggested by the combination of the Semaan and Shew references.

If the examiner still feels that the limitations of applicant's "alarm packet" is still shown in the combination of the Semaan and Shew references, the applicant respectfully reminds the examiner that it is the duty of the examiner to specifically point out each and every limitation of a claim being rejected as per §1.104(c)(2) of Title 37 of the Code of Federal Regulations and section 707 of the M.P.E.P., which explicitly states that "the particular part relied on must be designated" and "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified".

The above-presented arguments with respect to independent claims 6 and 14 substantially apply to dependent claims 7, 15, 22, 24, 28, and 30, as they inherit all the limitations of the claims from which they depend.

Hence, applicant respectfully requests the examiner to withdraw the rejections with respect to claims 6-7, 14-15, 22, 24, 28, and 30.

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Moreover, the present invention's method provides for advantages that are neither anticipated nor rendered obvious by the Seeman reference or the combination of Seeman and Shew references. For example, the present invention's method provides for an advantage whereby a substitute path, for a path logically formed in a transmission section, is secured efficiently at low cost when failure has occurred (see page 5, lines 8-10 in the application-as-filed). Applicant contends that the Semaan reference, or the combination of Semaan and Shew references, fails to teach or suggest such a low cost solution. Also, another advantage unique to the present invention is that a high degree of availability (which cannot be achieved in conventional networks in which the band of transmission service is only partially secured) in a network system is achieved (see column 5, lines 16-19). Such advantages are neither anticipated nor rendered obvious by the Seeman reference or the combination of Seeman and Shew references.

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

This amendment is being filed with a petition for extension. The Commissioner is hereby authorized to charge the petition fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-1290.



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If it is felt that an interview would expedite prosecution of this application, please do not  
hesitate to contact applicant's representative at the below number.

Respectfully submitted,



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